CASE 1831D.FDI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
HANCHETT, ET AL.
S.N. 10/053,926
FILED: 22 JANUARY 2002
FOR: SAGO FLUIDITY STARCH AND
USE THEREOF

GROUP ART UNIT: 1761
EXAMINER: ARTHUR L CORBIN

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER RULE 132

Sir:

I, Douglas J. Hanchett, a citizen of the United States currently residing at 8 Forest View Drive, Long Valley, New Jersey 07853 declare as follows.

I graduated from Fairleigh Dickinson University with a Bachelor of Science degree in Chemistry and from Country College of Morris with an Applied Associates degree in Chemical Technology.

I have been employed by National Starch and Chemical Company since 1991. Currently, I am the Innovation Process Manager of the National Starch Food Innovation group. My work at National Starch has been directed towards the

research and development of new, modified food starch products that provide novel and unique functional benefits in many target food applications. To do this I have utilized my strong knowledge of traditional modified food starch chemistries as outlined in the US Code of Federal Regulation, 21CFR172.892. In addition, I also have explored the use of many new and non-traditional starch sources, such as sago, in combination with traditional chemistries in my research work here in the United States and while working in Asia for several years. Overall, my work has given me a strong background in the development and use of novel starch bases and traditional modifications for a variety of applications and functionalities.

I am an inventor on seventeen (17) United States patents and applications, as well numerous non-US patents and applications.

I am familiar with the issues raised in the above-identified patent application and have read the Eden reference (US Patent No. 4,874,628). I understand that evidence of unobviousness includes results that are unexpected compared with the closest prior art, which in this case is Eden. A close reading of Eden shows that the closest starch to that used in my invention is a fluidity corn starch (See Eden at col. 6, lines 55-56 which states "acid-hydrolyzed corn starch being most preferred").

The examples of the above-identified application were conducted under my supervision and guidance to compare fluidity starches of different bases, specifically sago, corn, tapioca and potato. The fluidity starches were prepared by acid hydrolysis, the same as the preferred starch of Eden. Such experiments proved that fluidity sago starches in the range of 40-80 WF have significantly higher gel strengths and gelled more quickly.

Figures 1 and 2 specifically compare gel strength of fluidity starches of the different bases at a variety of WF values within this range. As can be seen

from Figure 1, a sago gel at the midpoint (60 WF) has about a gel strength of greater than eight times that of corn. At the low point (WF=40) and high point (WF=80) corn did not even gel. At a WF of 65, which is the fluidity used in the Eden examples, sago has a gel strength about 5.5 times that of corn. Thus, fluidity sago starch has a clearly superior gel strength over a fluidity corn starch as exemplified in Eden.

Fluidity sago starch is also superior in that it gels more quickly than other fluidity starches as shown by Figures 3-5. These figures compare gelling time, as indicated by an increase in viscosity, of fluidity starches of different bases at a variety of WF values and show than sago starch not only develops significant viscosity more quickly, but also reaches a higher viscosity. This is indicative of fast gelling times. Figure 4 shows a comparison of fluidity sago starch with fluidity corn starch at a WF of 65, which is the same as in Eden's examples. As is obvious, the fluidity sago starch not only obtains substantial viscosity (point at which it crosses the Brabender curve) about 10 minutes sooner, but also at 90 minutes has achieved a viscosity about 2.5 times that of corn.

In light of the above, I conclude that there is clear proof that the fluidity sago starches of the present invention are superior to other fluidity starches, particularly the fluidity corn starch of Eden. The superiority lies in the unexpected high gel strength and the fast gelling time. Such high gel strength and fast gelling time is desirable in many applications, including the jelly gum confections taught by Eden.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by a fine or imprisonment or both under 1001 of Title 18 of the United States Code and

such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Bridgewater, NS this April 21, 2006

location date

Douglas J. Hanchett